

## REMARKS

### STATUS OF THE CLAIMS

Claims 1 and 3-33 were pending prior to this Preliminary Amendment. Claims 1, 3-27 and 33 were treated on the merits in the Final Office Action dated September 5, 2001. Claims 28-32 — drawn to nonelected inventions — remain withdrawn from consideration.

By this Amendment, claim 4 has been canceled, claims 3, 7, 14 and 17 have been amended, and new claims 34-39 have been added. Claims 1, 3, 5-27 and 33-39 are therefore presented for reconsideration on the merits.

The indication of allowable subject matter in dependent claims 22 and 23 is noted, with appreciation (Final Office Action, ¶7). Applicants will leave those claims in dependent form for the time being.

### AMENDMENTS TO THE CLAIMS

New claims 34-39 have been added to reflect more closely the invention of Figs. 2 and 3. Support for these new claims can be found in the specification at page 9, line 11 through page 11, line 1.

New independent claim 34 in essence is a combination of claims 1, 4 and 5. Claim 4 has been canceled so as to avoid redundancy; and claims 7, 14 and 17 have been amended so that they now depend from claim 34.

New claim 34 is supported by page 9, line 23 to page 10, line 9 of the specification.

New claim 35 is supported by page 9, line 14 of the specification.

New claim 36 is supported by page 9, line 15 of the specification.

New claim 37 is supported by page 10, lines 23-24 of the specification.

New claim 38 is supported by page 10, lines 25-26 of the specification.

New claim 39 is supported by page 10, line 26 of the specification.

CLAIM REJECTIONS: PRIOR ART

The following rejections were made in the Final Office Action:

<u>O.A. ¶</u>	<u>Claims</u>	<u>Basis</u>	<u>Reference(s)</u>
3	1, 3-13, 17-21, 24-27, 33	§102(b)	Kishi (US 4,654,554)
4	1, 3-8, 10-13, 17-19, 24-27, 33	§102(e)	Azima (US 6,031,926)
5	14-16	§103(a)	Azima '926 in view of Kumada (US 4,352,961)

These rejections are respectfully traversed in the context of the pending claims for the reasons of record, and for at least the following additional reasons.

Kishi

It is noted that independent claim 1 and the claims dependent thereon relate to the embodiments of Figs. 1 and 4-26, in which torsion is applied to a panel-form member.

“Torsion” involves the *twisting* of an object:

**torsion.** 1a. The act of twisting or turning. b. The condition of being twisted or turned. 2. The stress or deformation caused when one end of an object is twisted in one direction and the other end is held motionless or twisted in the opposite direction.

The American Heritage® Dictionary of the English Language: Fourth Edition. 2000. Kishi’s vibration exciting system is not adapted to apply “torsion” to a “resonant” panel-form member as recited.

Fig. 11 of Kishi shows an acoustic radiator 30 provided with a piezoelectric vibrating element 10. There is no suggestion in Kishi that radiator 30 is a resonant member, or that piezoelectric element 10 imparts torsion to radiator 30. Rather, element 10 imparts a single, unidirectional force that is perpendicular to the radiator. Thus there is no *twisting* of the radiator in the accepted sense of torsion as specified in claim 1. Accordingly, Kishi cannot anticipate claim 1 or any claim dependent thereon.

Turning to new independent claim 34, Kishi's panel (Fig. 11a) is suspended by means of a soft foamed member 31 (see Kishi's column 8, line 6), which would readily compress under translating movement of the panel. In contrast, claim 34 recites that the suspension for the panel-form member "acts as a pivot." Kishi's suspension cannot function as a pivot because it is soft.

Further, as noted above Kishi does not disclose a resonant panel-form member. In accordance with Applicants' claim 34, movement of the panel-form member is determined by its resonant response to excitation from a vibration exciter. Such resonant response has multiple modes, the nodal lines of which are illustrated in Figs. 2a and 2b. By means of the suspension acting as a pivot, these nodal lines are moved closer to the edge of the panel as compared to a generally corresponding but resiliently or freely edge-suspended panel. This in turn allows the vibration exciter to be positioned closer to the edge of the panel, so as to bridge across several of the nodal lines. Kishi suggests none of these features.

In view of the foregoing, Kishi cannot anticipate claim 34 or any claim dependent thereon.

Azima '926 in view of Kumada

Azima '926 is no longer available as a reference against this application for purposes of rejecting claims under 35 U.S.C. §103(a). By virtue of its new filing date, this CPA is now subject to the provisions of the American Inventors Protection Act, specifically 35 U.S.C. §103(c), which became effective November 29, 1999 and states:

(c) Subject matter developed by another person, which qualifies as prior art only under one or more of subsections (e), (f), and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

As demonstrated by one of the attached assignments (Exhibit A), the application that matured into the '926 patent (No. 09/029,360) has been owned by New Transducers Limited since at least May, 1998. The present application, which was initially filed on August 27, 1999, was formally assigned to the same New Transducers Limited in October, 1999 (see the other assignment attached hereto, Exhibit B). Prior to then, at the time this invention was made, the three inventors were employees of New Transducers Limited and were under an obligation to assign their rights in the invention to New Transducers Limited. The requirements of §103(c) are therefore met in this case. Azima '926 thus cannot be used here in a rejection under §103(a). The rejection must therefore be withdrawn.

DOUBLE PATENTING

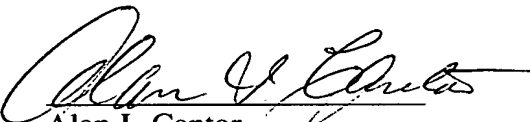
Claim 1 stands provisionally rejected on the ground of obvious-type double patenting as “unpatentable over all claims of U.S. Patent Application 08/707,012” (now US Patent No. 6,332,029). Final Office Action, ¶6. This rejection is respectfully traversed. The Examiner has not explained in any detail how the subject matter of claim 1 herein would have been obvious over what is recited in the claims of the '029 patent. A mere allegation of obviousness will not suffice. See M.P.E.P. §804II.B.1 (p. 800-22). There simply is no teaching in any claim of the '029 patent, or in any prior art reference, of a vibration exciting system that applies torsion to a panel-form member. Accordingly, the rejection cannot stand, and should be withdrawn.

CONCLUSION

For the foregoing reasons, the rejections should be withdrawn, and all of the claims allowed. Favorable action is earnestly solicited.

Respectfully submitted,

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Date

  
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SHOULD ADDITIONAL FEES BE NECESSARY IN CONNECTION WITH THE FILING OF THIS PAPER, OR IF A PETITION FOR EXTENSION OF TIME IS REQUIRED FOR TIMELY ACCEPTANCE OF SAME, THE COMMISSIONER IS HEREBY AUTHORIZED TO CHARGE DEPOSIT ACCOUNT NO. 19-0741 FOR ANY SUCH FEES; AND APPLICANT(S) HEREBY PETITION FOR ANY NEEDED EXTENSION OF TIME.

**MARKED-UP VERSION SHOWING CHANGES MADE**

IN THE CLAIMS:

3. (Amended) A loudspeaker according to claim [1] 34, wherein the vibration exciting system is adapted to apply shear to the panel-form member.
4. Canceled
7. (Amended) A loudspeaker according to claim [1] 34, wherein the vibration exciting system comprises a piezoelectric device attached to the panel-form member to apply a bending couple thereto by introducing alternating tension and compression to the panel-form member in the plane thereof.
14. (Amended) A loudspeaker according to claim [1, claim 5] 34 or claim 7, wherein the panel-form member is transparent.
17. (Amended) A loudspeaker according to claim [1 or claim 5] 34, wherein the vibration exciting system comprises an inertial device.